WAR AND ITS EFFECT ON THE INSECTICIDE INDUSTRY

R. L. MILLER

(Continued from page 56, Vol. XXV)

NICOTINE COMPOUNDS will probably be available since the supplies are mostly domestic. The demand for such chemicals is very temperamental, depending on seasonal conditions which favor the development of sucking insects; but it is the writer’s opinion that supplies of nicotine will be available in sufficient quantity. Black Leaf 155 and Black Leaf 10 have been developed for use as poisons as well as contact materials and in some instances have given excellent results against chewing insects.

PYRETHRUM at one time came largely from Japan but since the quality and uniformity of this product was too often tampered with, more recently the major production has come from Kenya Colony, on the east coast of Africa. Although the product is still available, transportation of such a bulky material over such a long distance will probably restrict the supplies available in the United States. This will be a handicap to the fly spray industry as well as to most vegetable growers. On June 11, 1942, the War Production Board issued Preference Order M-139 on Pyrethrum Flowers which, however, does not specify definite uses but requires that manufacturers using Pyrethrum Flowers get authorization for purchase of supplies from the War Production Board.
ROTHENONE is the one example of a very limited supply of an insecticide, on the regulation of the use of which a Government president has been set. Conservation Order M-133 restricts and specifies the use of rotenone compounds in the United States in connection with the war effort. If this is an example, and it most likely is, of the method in which other scarce chemicals will be distributed by government order if and when it is necessary, such a regulation can probably be worked out very nicely. In the case of rotenone, its use is prohibited in non-essential places and allowed for the Government or for the production of food crops on which no other insecticide is satisfactory. The rotenone supply comes almost entirely from the East Indies and South America and these sources have been practically cut off.

SULPHUR is almost entirely of domestic production and great supplies are available in Texas. For example, the Texas Gulf Sulphur Co., maintains more than a world year supply above ground at all times. It only remains for us to get sufficient transportation and manufacturing facilities to make available all sulphur products that are necessary.

It will probably be necessary to use sulphur compounds in place of other fungicides or insecticides wherever this is possible and it may be advantageous to exploit the uses of sulphur, as much as possible since large supplies of this are available domestically.

ZINC SULPHATE is available in considerable quantities in the United States although the war effort demands considerable quantities of zinc metal. In 1925 forty per cent of the world's production was produced in the United States. Both zinc oxide and zinc sulphate have been used, although zinc sulphate is by far the most used, in Florida agriculture. This material must be applied as a nutritional spray for citrus and this can be done most effectively during the spring or early summer. It is quite possible that, for a conservation practice, dilute sprays will be necessary annually or occasionally when fenching or zinc deficiency appears.

There are a large group of miscellaneous spreaders, stickers, wetting agents, and emulsifiers which are mostly organic chemicals and are from time to time quite restricted in their supply. It behooves every insecticide manufacturer to have alternate
compounds available which can be substituted for some commodity whose distribution has been restricted by the war effort.

The use of stickers is usually a very advantageous one, particularly when smaller quantities of chemicals will likely be available. Any compound that can be added to improve the effectiveness of one of the essential chemicals should certainly be used.

Considerable experimental work has been done with reduced dosages of many of the essential insecticides and fungicide chemicals with apparently quite satisfactory results. For example, it has been suggested that Rotenone Dust mixtures could be reduced to .5% Rotenone with satisfactory results. The same has been found to be the case with seed treating chemicals, fungicides, and many insecticides. In making recommendations, however, with reduced concentrations, care should be taken to make thorough enough applications so that the reduced toxic ingredients will be effective enough to give satisfactory control.

All entomologists can be of considerable service to growers now in pointing out the first or earliest stages of insect development so that populations can be prevented from building up. Considerably less chemicals are necessary for treating light infestations of small or young pests, whereas much greater amounts of heavier concentrations are necessary after dense populations have been built up.

All that has been said about the scarcity of essential insecticide and fungicide chemicals can be repeated regarding spray and dust equipment. In many cases special metals are used or particular brass or bronze parts are necessary; and these are and will be particularly hard to get.

High pressure spray hose is and probably will be scarce or limited in quantity just as all other rubber products are limited.

Transportation of insecticides and fungicides, as mentioned previously, is a considerable item and the shipment of all commodities is delayed. Growers can facilitate their own business by anticipating their demands as soon as possible and allowing the suppliers of their insecticides and fungicides as much time as possible to make delivery. Calculations as to the amount of material necessary should be very accurately done and request for return of unused products should be made as infrequently as possible. Since the movement of many insecticide and fungicide chemicals was by water, and freight rates were based on water transportation, which has now been discontinued to a
large extent, the cost of shipping coastwise moving chemicals has been increased considerably because of the difference in rail freight and water freight.

Containers for insecticides and fungicides have become more scarce and have increased in price. The supply of 55 gallon steel drums will probably be the greatest handicap of all container problems. Conservation of these drums by users is very essential to their being able to obtain additional supplies of those commodities that are transported in drums. As soon as the drum is empty, it should be returned to the manufacturer from whom it was obtained, in order that additional supplies may be moved.

As stated before, the writer is certainly not magician enough to tell specifically what particular items of insecticides and fungicides will be scarcest or will disappear from the market; but it is our suggestion that, since we are not sure as to the available supply, every effort be made to conserve both chemicals and equipment; and you may rest assured that every effort is being made by manufacturers and suppliers to obtain either the original insecticide and fungicide chemicals or to do sufficient research to establish the use of a substitute product so that the production of crops will not be handicapped.

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